

Energy Generation and Consumption Plan

Mayers Flat Farm, LLC

October 21st, 2021

The applicant, Mayers Flat Farm LLC cultivates cannabis in greenhouses, using light deprivation cultivation techniques. There is a small amount of supplemental lighting in the propagation greenhouse, that is in use February through June. Propagation Greenhouse lighting, water and air pumps, atomizer (for foliage feeding and pest/disease), fans, power tools, surge protectors, dehumidifiers, cannabis trimming machine and all electrical supplies and equipment as well as all domestic power in the residence is sourced from one 25kw diesel generator at this time. There is an additional 45kw generator that is used for emergency back-up purposes. Generator is always monitored by someone at site while in operation.

Energy conservative method are employed throughout the property. Domestic generator purposes limited to actual use time and generators are never left running without power loads. Domestic generator use is year-round, from the residence daily in the morning and at night,

Cultivation activities and cultivation with light deprivation will occur seasonally with 2 harvests. The following energy information describes the current project as it is, while on generators. Lights are only used in the propagation greenhouse to supplement natural light and keep plants in a vegetative state. Drying and processing activities consume power but are executed quickly in an efficient manner to minimize time of generator use.

Generator #1 is 25kw and is used primarily for all domestic purposes and cannabis activities. See chart below for monthly rates.

Generator #2 is a 45kw Diesel Generator that is only used for emergency back-up purposes. If the 45kw generator is used, it is only used short term, until repairs can be made on primary generator.

Current power requirement for propagation greenhouse is 460 watts of power. Supplemental lighting fixtures in propagation greenhouse are small, two sets of string lights with ten 23watt bulbs each for a total of 460 watts. Each light deprivation greenhouse contains several industrial fans. The drying shed also has fans and dehumidifiers.

Cultivation occurs in two cycles. Cycle one begins in late February of every year and cultivation ends in early July. Cycle two begins in May and ends in late Oct/ early Nov depending on Cannabis strain choices. Propagation Space is utilized from Feb through April and vegetative plants are moved into flowering greenhouses in April. New vegetative plants are started in the propagation greenhouses in May and moved into Flowering Greenhouses in July.

Flowering greenhouses do not receive light assistance. Fans and dehumidifies are used frequently in these greenhouses year-round and powered by the 25kw generator.

OSHA requirements have been met by the applicant and Hazmat training will be completed by the end of 2022. All hazmat materials are removed from site immediate and not stored in amounts that exceed threshold hold requirements for CUPA.

Plans for Photovoltaic solar system consisting of 16 250w photovoltaic panels and 16 deep cycle batteries with inverter is in progress. Applicant anticipates that all solar equipment installed and operational by 2026. At that time only one generator will stay on-site as a back up power source in cases of bad weather and low solar output

Energy Consumption Table

Type of Power Use	Hours per month												
Generator	Jan	Feb	Mar	April	May	June	July	Aug	Sept	Oct	Nov	Dec	Total
25 kw Diesel Cannabis Operations (Hours in use while no domestic)	0	112	124	180	186	60	129	60	180	128	124	0	1,283 hours
Total hours of energy generation Cannabis	0	112	124	180	186	60	129	60	180	128	124	0	1,283 hours
Type of Power Use	Hours in operation per month												
Generator	Jan	Feb	Mar	April	May	June	July	Aug	Sept	Oct	Nov	Dec	Total
25 kw Diesel Domestic Operations	196	178	196	190	196	190	196	196	190	196	190	196	
Total hours of energy generation Domestic	196	178	196	190	196	190	196	196	190	196	190	196	2,310 hours
Total hours of energy generation Property	196	290	320	370	382	250	386	256	370	324	314	196	3,654 total hrs/yr

Energy calculations include fans, dehumidifiers, and trim machines. Trim machines only used during harvest in July, October, and November.

February through June propagation greenhouse will require an additional 4 hours a day of power.

In July, October and November drying and harvesting as well as processing will occur. Power usage will increase by 4 hours a day on 25kw domestic use generator.

Domestic Calculations based on 2 hours in the morning and 4 hours in the evening of generator use for domestic purposes. Additional 10 hours of emergency use added per month.